NOTE XXI.

ON THE WEST-AFRICAN SPECIES OF THE SUBGENUS EUPALAEMON ORTM.

BY

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In addition to my description of *Palaemon* (*Eupalaemon*) *Lenzii* de Man (see p. 225 of this volume) I give here a key to the species of the subgenus *Eupalaemon* Ortm. as yet known to occur in the rivers of West-Africa. Six species are at present known from there, viz.:

1. *Pal.* (*Eupalaemon*) *macrobrachion* Herklots 1851.
   General distribution: The rivers from Sierra Leone to Benguella [Sierra Leone (v. Martens); Liberia (de Man); near Boutry (Herklots); river Prah, South of Ashantee (de Man); Cameroon (Aurivillius); Congo coast, probably from Ambriz (de Man); from fresh water at Catumbella near Benguella (de Man)].
2. *Pal.* (*Eupalaemon*) *paucidens* Hilgd. 1893.
   General distribution: Adeli near Bismarckburg, Togo country (Hilgendorf).
3. *Pal.* (*Eupalaemon*) *Foai* Cout. 1902.
   General distribution: Upper Congo (Coutière); Bimfülle, a tributary of the Rio Benito (Lenz); river Kribi, 25 miles from the coast of Cameroon (de Man); Dume, Cameroon (Lenz).
4. *Pal.* (*Eupalaemon*) spec. (?) Cout. 1902.
   General distribution: Upper Congo (Coutière).

5. *Pal.* (*Eupalaemon*) *dux* Lenz 1910.
General distribution: Avakubi upon Ituri (Lenz); Rio Benito (Lenz).
6. *Pal.* (*Eupalaemon*) *Lènzii* de Man 1911.
General distribution: river Congo, probably near Boma (de Man).

KEY TO THE SPECIES OF THE SUBGENUS *Eupalaemon* Ortm.

a_1 Two or three of the upper rostral teeth are situated on the carapace, behind the orbital margin. Spinules on the inner border of the carpus and of the palm of the 2nd legs much larger than those on the outer border, often arranged in two more or less distinct, parallel rows. Anterior pair of spinules situated before the middle of the telson, very rarely just in the middle.

b_1 Fingers of the 2nd legs covered with a woolly felt. Carpus of the 2nd legs distinctly longer than the palm. *macrobrachion* Herklots.
(J. A. Herklots, Additamenta ad Faunam Carcinologicam Africae Occidentalis, L. B. 1851, p. 15).

b_2 Fingers of the 2nd legs not covered with a woolly felt. Carpus of the 2nd legs appearing at first sight almost of the same length as the palm, being but a trifle longer, sometimes even a trifle shorter than the palm. *Lenzii* de Man.
(J. G. de Man, Notes from the Leyden Museum, Vol. XXXIII, 1911, p. 225 [1]).

a_2 Only one tooth is situated on the carapace, behind the orbital margin.

1) At page 225 of this paper the words „kein Zahn" instead of „ein Zahn" in Lenz's description of *Palaemon dux* have been indicated, to my great regret, too emphatically as „a rather confusing inaccuracy". The quite accurate figure 2, in connection with the preceding words „Der Augenstiel entspringt genau unterhalb des 2. Rostralzahnes", proves indeed at once that in *Pal. dux* one tooth is situated on the carapace and that the words „kein Zahn" are merely a lapsus calami.

b_1 Legs of the 2nd pair not tomentose.

c_1 Second legs with the palm distinctly longer than the carpus.

d_1 Rostrum $\frac{2}{4}$ or $\frac{2}{3}$ dentate, the 2nd tooth placed above the orbital margin, lower margin with the anterior half dentate. Both the outer and the inner border of the palm of the 2nd legs are furnished with a single conspicuous row of large spinules, much larger than the spinules of the upper- and lower surface, those of the outer border nearly of the same size as those of the inner one and, in the middle of the palm, placed perpendicularly to the axis of the chela; fingers tapering, presenting on the lower side, between the anterior tooth and the tip, 14 or 15 conical spinules, placed perpendicularly to the finger. *dux* Lenz.

(H. Lenz, in: Wissens. Ergebn. d. Deutschen Zentral-Afrika-Expedition 1907—1908, Bd. III, Zool. I, Leipzig 1910, S. 9, Taf. III, Fig. 2—5).

d_2 Rostrum $\frac{7-8}{1-2}$ dentate, the teeth of the lower margin situated on its distal fourth part. Legs of the 2nd pair covered with small spinules, fingers armed with 7 spines near the cutting-edge. *paucidens* Hilgd.

(F. Hilgendorf, in: Sitzungsber. Gesells. naturf. Freunde zu Berlin, Jahrg. 1893, N° 5, S. 155).

c_2 Second legs with the palm distinctly shorter than the carpus and covered with small spinules; fingers slightly setose at both sides of the middle-line. Rostrum $\frac{6-8}{5-7}$ dentate. *Foai* Cout.

(H. Coutière, in: Bull. Mus. Paris, 1902, N° 7, p. 517).

b_2 Legs of the 2nd pair covered with a feeble tomentum, under which the joints are smooth and gla-

brous; palm distinctly shorter than the carpus. Rostrum $\frac{2}{3}$ dentate. spec.(?) Cout.
(H. Coutière, loc. cit. p. 519).

REMARKS: *Pal.* (*Eupalaemon*) *paucidens* Hilgd. has, unfortunately, never been figured, but, according to Hilgendorf's description, this species seems to be closely related to *Pal.* (*Eupalaemon*) *dux* Lenz, and I should not be surprised when, after a comparison of the type-specimens, *Palaemon dux* should prove to have been founded on a full-grown specimen of *Pal. paucidens* [1]). The rostrum of *Pal. paucidens* is described as high, foliaceous, though short, characters which are presented also by *Pal. dux*; in Hilgendorf's species the carpus was still hardly longer than the merus; but this difference could be explained by the much smaller size of this leg compared with that of *Pal. dux*. It is, however, unknown whether the characteristic spinulation of the chela of *Pal. dux* exists also in the species from Togo country.

The unnamed species, finally, has been founded by Coutière on a single specimen, which, according to this author, had not yet attained its full size and development.

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1) In 1901 Mr. W. F. Lanchester has described under the same name of *paucidens* a new species of the genus *Palaemon* from Singora on the east-coast of the Malay Peninsula (in: Proc. Zool. Soc. London, 1901, Vol. II, p. 568, Pl. XXXIII, fig. 4). This species, which also belongs to the subgenus *Eupalaemon* but which is quite different from Hilgendorf's *paucidens*, may henceforth bear the name of *Pal.* (*Eupalaemon*) *Lanchesteri* de Man.